Claim 1 (Withdrawn). A method for stimulating angiogenesis within a targeted collection of viable cells in-situ, said method comprising the steps of:

identifying a collection of cells comprising viable cells in-situ as a target for stimulation of angiogenesis;

providing means for effecting an introduction of at least one member selected from the group consisting of the PR-39 oligopeptide collective to the cytoplasm of said targeted collection of cells;

introducing at least one member of the PR-39 oligopeptide collective to the cytoplasm of said targeted collection of cells using said effecting means;

allowing said introduced PR-39 oligopeptide collective member to interact with such proteasomes as are present within the cytoplasm of said targeted collection of cells whereby

(a) some of the proteasomes can interact directly with said PR-39 oligopeptide collective member while other proteasomes can interact indirectly with said PR-39 oligopeptide collective member, and

(b) the proteolytic degradation of at least one identifiable peptide mediated by said interacting proteasomes becomes altered while the proteolytic degradation mediated by said interacting proteasomes against other individual peptides remains unaltered, and

(c) the altered proteolytic degradation of said interacting

proteasomes results in a stimulation of angiogenesis in-situ within the targeted collection of viable cells.

Claim 2 (Withdrawn). A method for selective inhibition of proteasome-mediated degradation of peptides in-situ within a collection of viable cells, said method comprising the steps of:

identifying a collection of cells comprising viable cells in-situ as a target;

providing means for effecting an introduction of at least one member selected from the group consisting of the PR-39 oligopeptide collective to the cytoplasm of said targeted collection of cells;

introducing at least one member of the PR-39 oligopeptide collective to the cytoplasm of said targeted collection of cells using said effecting means;

allowing said introduced PR-39 oligopeptide collective member to interact with such proteasomes as are present within the cytoplasm of said targeted collection of cells whereby

(a) some of the proteasomes can interact directly with the PR-39 oligopeptide collective member while other proteasomes can interact indirectly with said PR-39 oligopeptide collective member, and

(b) the proteolytic degradation of at least one identifiable peptide mediated by said interacting proteasomes becomes markedly altered while the proteolytic degradation mediated by said interacting proteasomes

against other individual peptides remains unaltered, and

(c) the markedly altered proteolytic degradation of said interacting proteasomes results in an increased expression of said identifiable peptide in-situ within the targeted collection of cells.

Claim 3 (Withdrawn). The method as recited in claim 1 or 2 wherein said collection of viable cells includes at least one type of cell selected from the group consisting of endothelial cells, myocytes and myoblasts, fibrocytes and fibroblasts, epithelial cells, osteocytes and osteoblasts, neuronal cells and glial cells, erythrocyctes, leukocytes, and progenitor cells of all types.

Claim 4 (Withdrawn). The method as recited in claim 1 or 2 wherein said collection of cells comprises at least one tissue selected from the group consisting of myocardium, skeletal muscle, smooth muscle, an artery, a vein, lung, brain, kidney, spleen, liver, gastrointestinal tissue, nerve tissue, limbs, and extremities.

Claim 5 (Withdrawn). The method as recited in claim 1 or 2 wherein the means for an introduction of a PR-39 oligopeptide collective member include one selected from the group consisting of catheter-based means, injection-based means, infusion-based means, localized intravascular

means, liposome-based means, receptor-specific peptide means, and slow releasing means for peptide secretion in living cells and sequestered organisms.

Claim 6 (Withdrawn). The method as recited in claim 1 or 2 wherein the means for an introduction of a PR-39 oligopeptide collective member includes DNA sequences coding for at least one PR-39 oligopeptide collective member in an expression vector for transfection and subsequent expression of the PR-39 oligopeptide collective member within said cells.

Claim 7 (Withdrawn). The method as recited in claim 1 or 2 wherein said method is practiced under in-vivo conditions.

Claim 8 (Withdrawn). The method as recited in claim 1 or 2 wherein said method is practiced under in-vitro conditions.

Claim 9 (Withdrawn). The method as recited in claim 1 or 2 wherein degradation of IKBa is inhibited.

Claim 10 (Withdrawn). The method as recited in claim 1 or 2 wherein degradation of HIF-1a is inhibited.

Claim 11 (Currently Amended). A family of PR-39 derived oligopeptides whose members individually cause a selective inhibition of proteasome-mediated degradation for at least one identifiable peptide in-situ after introduction intracellularly to a viable cell, each member of said PR-39 derived oligopeptide family:

being a peptide <u>less than 14</u> ~~ranging from about 8 to about 25~~ amino acid residues in length;

being a peptide having a N-terminal amino acid residue sequence which begins with Arg-Arg-Arg;

being a peptide which is devoid of the amino acid residue sequences Pro-Pro-X-X-Pro-Pro-X-X-Pro and Pro-Pro-X-X-X-Pro-Pro-X-X-Pro where X is any amino acid;

being a peptide able to be introduced intracellularly to a viable cell;

being a peptide able to interact selectively in-situ with such proteasomes as are present within the cytoplasm of the cell; and

being a peptide able to alter markedly the proteolytic degradation of at least one identifiable peptide mediated by said interacting proteasomes such that an increased expression of said identifiable peptide occurs in-situ.

~~Claim 12 (Previously Presented). The PR-39 derived oligopeptide family as recited in claim 11 whose membership includes a peptide~~

~~comprised of 15 amino acid residues whose sequence is Arg-Arg-Arg-Pro-Arg-Pro-Pro-Tyr-Leu-Pro-Arg-Pro-Arg-Pro-Pro [SEQ ID NO: 3]~~.

Claim 13 (Withdrawn). The PR-39 derived oligopeptide family as recited in claim 11 whose membership includes a peptide comprised of 11 amino acid residues whose sequence is Arg-Arg-Arg-Pro-Arg-Pro-Pro-Tyr-Leu-Pro-Arg [SEQ ID NO:4].

Claim 14 (Withdrawn). The PR-39 derived oligopeptide family as recited in claim 11 whose membership includes a peptide comprised of 8 amino acid residues whose sequence is Arg-Arg-Arg-Pro-Arg-Pro-Pro-Tyr [SEQ ID NO:5].

Claim 15 (New). The PR-39 derived oligopeptide family as recited in claim 11 whose membership includes a peptide comprised of 11 amino acid residues whose sequence is Arg-Arg-Arg-Pro-Arg-Pro-Pro-Tyr-Leu-Pro-Arg [SEQ ID NO:4].

Claim 16 (New). The PR-39 derived oligopeptide family as recited in claim 11 whose membership includes a peptide comprised of 8 amino acid residues whose sequence is Arg-Arg-Arg-Pro-Arg-Pro-Pro-Tyr [SEQ ID NO:5].